What is claimed is:

1. An arrangement for the visualization of information in a motor vehicle, comprising:

an optical device for projecting at least one display for forming a virtual image in front of or in an area of a windshield of the vehicle, wherein microchips such as DMDs or LCOs are provided as image-generating elements, and wherein an intermediate imaging is realized for the purpose of illuminating the pupil plane; and

a diffusion screen which enlarges the radiating angle being arranged in the intermediate image plane and/or an apparatus for splitting the light flow into partial light flows being located between the optical device and the pupil plane, wherein a partial light flow is associated with the left eye and a partial light flow is associated with the right eye.

2. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein the diffusion screen has a different radiating characteristic in the two orthogonal directions.

3. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein a deflecting element is provided for the purpose of mirroring the partial light flows into the pupil plane.

4. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein the apparatus for splitting the light flow is constructed so as to be transmissive and/or reflective.

5. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein an optical grating is provided for the purpose of splitting the light flow.

6. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein a transmissive or reflective optical element with a Fresnel structure is arranged in front of the pupil plane, wherein the splitting into partial light flows is carried out by means of the flanks of the Fresnel structure.

7. The arrangement for the visualization of information in a motor vehicle

according to claim 1, wherein a reflective polarization-optical element is provided for splitting the light flow into partial light flows.

8. The arrangement for the visualization of information in a motor vehicle according to claim 7, wherein the reflective polarization-optical element is a wedge, and the light flow entrance surface has a polarizing splitter layer at which the first partial light flow is reflected at an angle α to the incident direction in the pupil plane, and the second light flow which enters into the wedge and strikes the reflecting wedge surface located opposite the light entrance surface reaches the pupil plane by reflection at an angle β to the incident direction.

9. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein optically refracting deflecting elements are provided in the beam paths for the purpose of directional orientation of the partial light flows.

10. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein the element for splitting the light flow for one or both partial light flows has a focussing or dispersing effect.

11. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein one or more optical components are provided for the purpose of directional orientation of the partial light flows, so that the virtual image appears at the same location for both eyes.

12. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein the elements for directional orientation of the partial light flows have a focusing or dispersing effect.

13. The arrangement for the visualization of information in a motor vehicle according to claim 1, wherein a device for homogeneous illumination of the pupil plane is provided in the illumination arrangement of the microchip.

14. The arrangement for the visualization of information in a motor vehicle according to claim 13, wherein the device for homogeneous illumination of the pupil plane is a diffusion screen.